

MODIFIED LIVE *FLAVOBACTERIUM COLUMNARE* AGAINST
COLUMNARIS DISEASE IN FISH

Background of the Invention

Field of the Invention

[0001] *Flavobacterium columnare* is an aquatic bacterium that is highly infectious in both warm and cold water species of fish. In the channel catfish (*Ictalurus punctatus*), it is the causative agent of columnaris disease. *Flavobacterium columnare* is a Gram-negative, rod shaped, pathogen that has been isolated from channel catfish in areas of the southeastern United States where this species is cultured. The disease also affects sports fish (i.e., walleye and largemouth bass) and aquarium fishes. Medicated feed (antibiotics) is currently used to try and control this bacterial infection. However, these treatments are limited in their effectiveness and most producers have discontinued use of medicated feeds. Prevention of columnaris disease by vaccination is an important goal and a top priority of catfish